

Name: KeyGoal for Today: Use Charges from Atoms to Predict Compound Formulas

- ~ Atoms will consistently form the same charges when made into ions (Octet Rule)
- ~ Use the chart below to predict the charge when an atom becomes an ion

Periodic Table

+1	+2	Trend for Ionic Charge						+3	+4 -4	-3	-2	-1	0
		<div>+2</div> <div>Transition Metals</div> <div>(charges vary)</div>											

Directions how to determine the compounds formula: example

- 1) Get the charge of the atoms involved
- 2) Reduce the charges, if possible.
- 3) Cross the **charges (superscript)** from one atom down to the other atom to become **quantities (subscript)**
- 4) Disregard the +/- signs

Example: (H & O)

Step 1 = H^{+1} & O^{-2} Step 2 = H^{+1} & O^{-2} = already reducedStep 3 = H_{-2} & O_{+1} Step 4 = H_2O_1 or H_2O

Example: (Na & Cl)

Step 1 =

Step 2 =

Step 3 =

Step 4 =

Example: (Mg & S)

Step 1 =

Step 2 =

Step 3 =

Step 4 =

Example: (Ca & F)

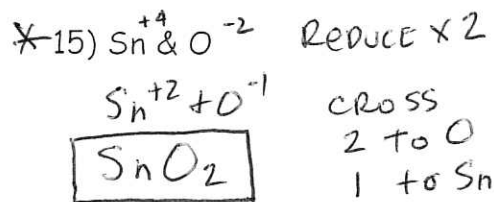
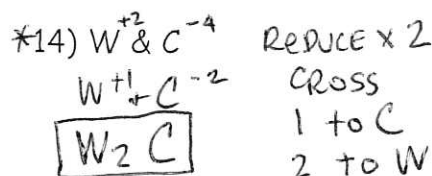
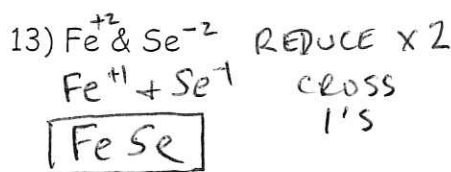
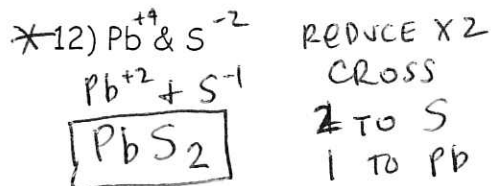
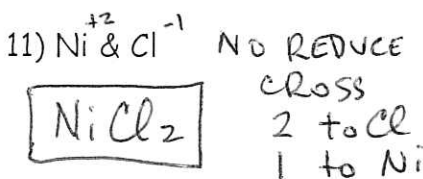
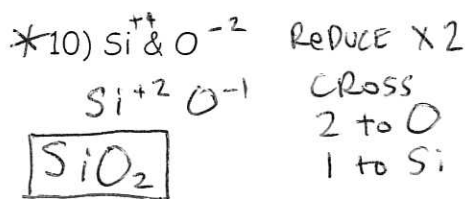
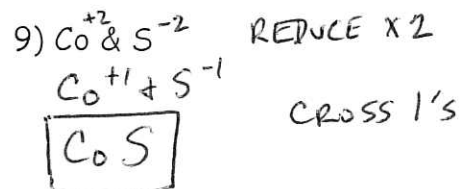
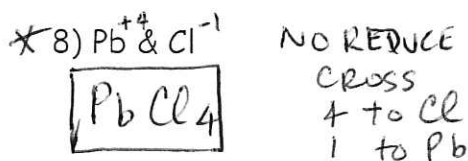
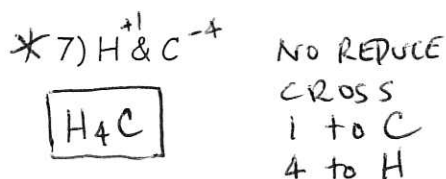
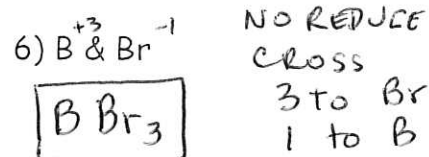
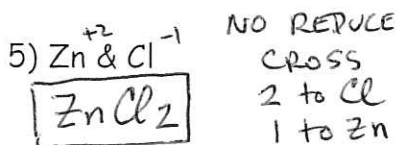
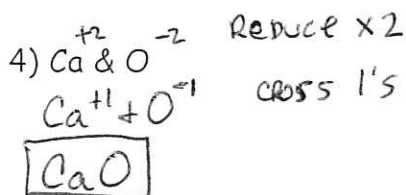
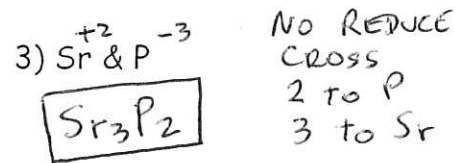
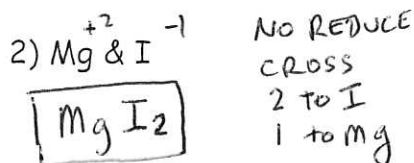
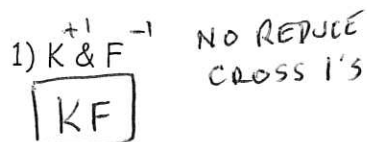
Step 1 =

Step 2 =

Step 3 =

Step 4 =

Practice Problems:



* NOTE: IF GROUP 4A (CARBON GROUP) IS FIRST
THEN IT IS A CATION (+4)

IF IT IS SECOND then it is AN ANION

ex #8 Pb is FIRST therefore Pb is +4

#7 C is SECOND therefore C is -4